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Dr. Henry C. Lee
Director
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Forensic Science Laboratory
294 Colony Street
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Dear Henry:

Your response to me is the most thoughtful and I will comment on each and forward both to the National Academy of Sciences. Thank you for the detailed review.

1) I agree with you that the report has a negative feel to it. I certainly do not write that way but others do. I have tried to modify this tone in my revisions of text submitted to NAS. This is a powerful tool and needs to be encouraged not degraded. This will require line by line revision of the near final draft. I plan to do it.

2) I will pass this on the staff writers. I did not realize the "forensics"/"forensic" difference. Remember, I was educated in the U.S. not in the British system. I will pass this on.

3) This is a correct point and I avoid "body fluid". It should come out in all places of the text.

4) On this point one could search on any of probe results from a case study against the DNA data base. In some cases, the investigator may have one or up to six probes. Would this not be similar to "scan" of a latent print and identification by 10-print file. I am not sure this is a major point of difference.

On your second point, I disagree. With PCR and automation it will be possible to develop rapidly a large data base. It appears impractical with Southern methods - in my opinion.

5) I agree the words identity and identification are not

the same. I personally do not use them with DNA. I use the terms "match" and "significance of match". Would match equal partial individuation and significance of match equal individualization? This will require line to line text review.

6) I totally agree with this point. "Mixed" specimens are common in forensic studies (*i.e.* rape kit) and are easily interpreted by Southern methods. It is my opinion based on our experience with PCR that one can analyze and interpret "mixed" specimens.

7) I agree with the "meaningless" word usage. I am in agreement with you on this point. I did not write it.

8) I disagree with you on cost. I find the high cost of Southern to be time and repeat study due to lack of sensitivity. We are completing PCR-based forensic studies on Operation Desert Storm cases within 12-24 hours of having DNA. We have gotten values over 1 in 100,000 in all cases (30). I have included a copy of our recently submitted paper.

I feel we need to give PCR a higher profile than we have with the present report. It is the method of the future.

9) We will seek out the data

10) Over-regulation is a potential negative outcome of this report. To give you an example - our DNA laboratory is run by an American Board of Human Genetics certified Director (me) who had to obtain an additional license from the State of New York (incidentally, no examination - paper pushing). Secondly, the laboratory is examined by ACP, CLIA, Medicaid, and Medicare. We decided not to seek New York examination on the basis of cost. All these organizations have inspected operation of the lab not substance. Only the FBI and CORN have provided DNA examination (operation proficiency) at this time. This was voluntary. Lab certification is a pain, expensive, and not appropriately targeted presently. We are trying to set up a national STD through the American Society of Human Genetics (ASHG) together with the American College of Physician (ACP) which I hope will be a single accepted examination. As indicated in the report,

now been contacted by ASHG, AABB, CLIA to conduct their tests. It is headed in the right direction. If professionals had not taken leadership in this area we would continue with laws and no effect. Did you see the recent *New York Times* article critizing CLIA for no substantive action on the 88 law?

I feel strongly that the professional groups of FBI, ASCLAD, and other national experts (molecular, population, regulatory, etc.) need to set a single set of standards under financial auspices of the Justice Department. This one "inclusive and informed" advisory group could recommend and administer laboratory certification. The State of New York will do its own law on certification. We cannot stop that type of action, only discourage it. Such a system would improve quality of work, more ready acceptance in the court and eliminate redundant examinations.

One the cost issue I also agree. This has to be reasonable. The ASHG estimated $300,000/year to service human genetic laboratory certification. Working with ACP, an established examining professional group, the cost will be $80,000. This distributed cost will be reasonable for out laboratories. What about forensic science? The cost will obviously be borne in the case of forensic labs by state and federal sources since you do not render fees for service.

Finally, I am very dedicated that we not represent the current practice in a poor light. I feel the FBI in particular is doing a very good job with Southern technology. I have concern that not all "joiners" will be as careful. We must assure a "standard of practice" and have mechanisms in place to recognize those lab within the standard and remove or prevent initiation of below standards labs.

Sorry for the long reply.

Sincerely,

C. Thomas Caskey, M.D., F.A.C.P.
Henry and Emma Meyer Professor
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CTC/emp
Enclosure

xc: Dr. Oskar Zaborsky
Dr. Victor McKusick